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ABSTRACT

A study examined the effectiveness of a staff development program in the Yale (Michigan) public schools, intended to provide professional development to all elementary and secondary language arts teachers about the instruction of writing process and the evaluation of student work. Evaluation of the professional development model included teacher surveys of faculty training workshops and pre- and post-workshop opportunities for students to write. Workshops for teachers received high rankings and the school district experienced a large and significant increase in student writing opportunities. To evaluate qualitative outcomes for student writing, a field experiment was conducted using an out-of-district classroom as a control. Intercorrelations for judgments were high, and the experimental class showed greater and more significant improvement than the control. The data seem to indicate that the professional development model used had an effect on teacher and student behavior and has resulted in both quantitative and qualitative outcomes. Student opportunities to write jumped by almost threefold. Furthermore, the data indicates that the direct instruction of process writing can make a significant difference in the quality of student writing. (A copy of "Teacher Training Programs in Writing," published by the Center for Effective Communication in Andover, Massachusetts, is appended.) (HB)

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Implementation and Evaluation of a Writing Process Program

Stephen A. Anderson, Diane Collins, Rick Collins, Terry Dagg, Kathy Dams, Debra Gilmore, Nancy LePla, Beth Robinson, and Kathy Taylor.

Yale Public Schools
Yale, Michigan 48097

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ABSTRACT

During the 1990-91 school year, language arts was the focus curriculum area for Yale Public Schools. A language arts committee was formed of faculty and administration. Several needs were assessed and expressed by that committee: (1) the lack of opportunity for students to write, (2) the lack of quality in student writing, and (3) the need to provide professional development to all elementary and language arts teachers about the instruction of a writing process and evaluation of student work. An evaluation design and professional development model was created and is described. Evaluation of the professional development model included teacher surveys of workshops and pre- and post-opportunities for students to write. Workshops for teachers received high rankings and the school district experienced a large and significant increase in student writing opportunities. To evaluate qualitative outcomes for student writing, a field experiment was conducted using an out-of-district classroom as a control. Student papers were coded and judged by teachers from several grade levels using the Registered Holistic Scoring Method for Scoring Student Essays. Intercorrelations for judgements were high. While the control class started and ended with higher mean scores, the experimental class showed greater and significant improvement.

Implementation and Evaluation of a Writing Process Program

Introduction

In the summer of 1990 the Language Arts Committee at Yale Public Schools began meeting with the charge to assess language arts needs, develop an inservice plan, review and revise K-12 curriculum, and make recommendations to the Yale Board of Education regarding curriculum and instructional materials purchase. Membership on the Language Arts Committee consisted of teachers from every grade level, department chairpersons at the secondary levels, and an administrator.

The needs assessment started with a review of the Nation's Report Card by the National Assessment of Educational Progress (NAEP, Applebee et al, 1990) for writing and ERIC searches on writing and assessment of writing. The faculty agreed with the national assessment that their observations were that students had few opportunities to write and that the quality of writing was inadequate. A few of the members had participated in a class on teaching a writing process and the committee agreed with the NAEP (Applebee et al, 1990) that to instruct students in a writing process would result in improvements in student writing both quantitatively and qualitatively.

A review of relevant research (Scardamalia and Bereiter, 1986) reinforced the conclusions of the committee. In assessing the writing process of skilled writers, a composition protocol (collecting information, organizing,

writing, and revising) is used but often not in the linear manner taught. Various studies seem to conclude that a major requirement for competence in writing is learning the essential forms of various literary types- narrative, exposition, argument, and the like. Studies also indicate that the explicit instruction of a writing process can have a significant effect on how students write.

With the conclusion that a writing process should be used to instruct students, a staff development plan was devised. Using effective staff development research (Sparks, 1983), the following principles were agreed upon in the scheduling of professional development for the 1990-91 school year:

1. Start with a general overview of the concepts.
2. Provide teachers with specific "nuts and bolts" of a writing process model that included demonstration, practice, and feedback so that they could readily implement techniques into their classrooms.
3. Spread the inservice over several weeks or months to allow for experimentation and to allow for teachers to come back and discuss problems with an expert consultant.
4. Encourage implementation, visitations, and discussion amongst the faculty.

Several consultants with state and national reputations were contacted to determine availability, schedule, cost, and content of presentations. After review, the committee decided to obtain the services of Dr. David Crellin from The Network in Massachusetts to provide inservice on a writing and writing evaluation process for the intermediate and secondary teachers. Dr. Crellin scheduled two half-day

workshops for the faculty during the school year and one week writing academy in the summer in which teachers could earn graduate credit. The class day for the writing academy was split between class with Dr. Crellin and using these techniques with students in grades 6-12 under Dr. Crellin's supervision. The academy was proceeded by a two day workshop for teachers on a word processing program so that teachers would have the expertise to use a technological application for a writing process model. The academy provided a free summer school opportunity for students in the school district. An outline of Dr. Crellin's workshops is provided in the Appendix. In general, concepts taught to teachers included prewriting activities, drafting activities, revision and proofreeading activities, sharing activities, writing across the curriculum, the implementation of a "focus correction" portfolio system, and the development of writing assignments. Besides teacher workshops, copies of The Network's books, *The Effective Writing Teacher* and *Implementing the Cumulative Writing Folder Program* on these topics were purchased for each building.

Mrs. Pam Moorhead, a teacher from a neighboring district was obtained to provide inservice to primary teachers on the application of language arts concepts through writing ("Whole Language") at the primary grades. A Section 98 Professional Development Grant was obtained from

the Michigan Department of Education to defray some of the expenses of this professional development program.

Goals and Expected Outcomes

The goals established for this project were as follows:

1. The faculty will learn a writing process model.
2. Faculty will learn examples of writing activities in all content areas.
3. Faculty will develop a writing evaluation system.
4. Faculty will learn teaching techniques for writing and apply same in academy with peer and expert coaches.
5. Faculty will learn basic word processing skills.

The expected outcomes from this project as it relates to the implementation of a writing process and based upon the needs assessment and review of research were as follows:

1. Observable changes in teacher behavior regarding teaching writing.
2. Increased student opportunities to write.
3. Improved quality of student writing.
4. A writing evaluation system that could provide annual and long-term feedback to teachers and the school community.

Evaluation Design and Results

In terms of observable changes in teacher behavior, two means were used to evaluate the outcomes of the professional development program. The first was to assess the teacher's perception of the workshops themselves. The second means of evaluation related to the second outcome. It was assumed that if teachers were to change their behavior in regards to a writing process model, this would result in increased

student opportunities to write. Table I lists the means for teacher evaluation of the various workshops held throughout the year. A copy of the teacher Staff Development Participant Evaluation survey is included in the appendix. Of particular concern were items four through ten which asked for an evaluation of workshops for various characteristics using a scale of 1 through 5 with "1" representing "poor" and "5" representing "excellent". In almost every case, the mean response was between 4 and 5. The only mean that fell below 4 was in response to the question concerning facilities for the workshop on whole language.

Table I

Mean Responses From the
Staff Development Participant Evaluation Survey

Question	Whole Language Mean (n=14)	Writing Process Mean (n=31)
4. The program was well organized.	4.53	4.69
5. The objectives of the program were clearly evident.	4.40	4.56
6. The leader/instructor's instructional skills were:	4.71	4.78
7. The program included an effective level of participant involvement.	4.07	4.94
8. Facilities and accommodations were conducive to learning.	3.73	4.55
9. The program provided the necessary ingredients for me to have an effective learning experience.	4.27	4.65
10. I will be able to use the information and/or skills acquired through this program to improve my effectiveness on the job.	4.27	4.78

The second hypothesized outcome was that with changed teacher behavior regarding a writing process model, there should be an increase in the number of student opportunities to write. In essence, this would be a quantitative evaluation of this program.

Teachers were asked in the spring previous to the completion of the inservice to provide an estimate of the number of writing opportunities or assignments they gave their students during the school year. It was assumed that the data obtained from this survey would be ratio data.

Therefore, a one-tailed student t-test for independent samples when the variance was assumed not to be equal was applied to the data (H_0: $\mu_1-\mu_2=0$, when $\sigma_1^2 \pi \sigma_2^2$). Summary pre- and post-data is provided in Table II. The difference represents a 294% increase in the mean reported writing opportunities and is statistically significant at the .005 level ($p<.005$). An examination of the data will show a very high standard deviation for both pre- and post-data. This may indicate that will many teachers have made changes in their behaviors and assignments, while some have not made the change which may account for the large range of estimates.

Table II

Student Writing Opportunities

	Pre-Workshops	Post-Workshops
Sums	300	3071
Count (N)	15	39
Means	20	78.74
Standard Deviations	26.69	79.79
Difference		58.74*

*$p<.005$

The third item for evaluation was a qualitative assessment of student writing before and after implementation of the writing process model. An ERIC search

was made of assessments of writing. After review by the committee, the decision was made to use The Registered Holistic Scoring Method for Scoring Student Essays (Bloom, 1985) due to its reported reliability and standardized criteria for evaluation which is also used by the state of New Jersey and the Educational Testing Service. This method is based upon defined features of writing quality and levels of writing proficiency. This instrument is used in New Jersey to evaluate essays of ninth grade students statewide. The assumption was made that numbers assigned to papers using this method would be interval data.

Even for a small rural school district like Yale Public Schools, the numbers and time it would take to judge student papers would be enormous. Therefore, the committee decided to test the method of evaluation and the quality of student papers by using a sample. A fifth grade class volunteered to participate in the experiment (n=20). To add control and comparison to the field experiment, a similar class from a neighboring district volunteered to submit papers (n=29). The assignment given to both groups was to write a one page narrative on a topic of the student's choice. This assignment was given in the fall before instruction in a writing process and in the spring after writing process instruction. Therefore, for each class each student served as their own control. In an interview with the teacher of the control class, no formal writing instruction occurred during the school year. All identifying data was removed

from the papers. A random 5 digit code was assigned to each paper. The papers were then randomly mixed into six groups.

Judges for evaluating papers were obtained from volunteers from the Yale Public School faculty. Seven faculty members were chosen and represented teachers from elementary, junior high, and senior high school levels. Each judge was ask to judge three groups of papers. Each judge recorded their evaluation on a scoring form. Thus each paper received three evaluations and the average of these evaluations was used in comparisons.

The statistical test applied to each class was a one-tailed t-test for dependent samples (H_0: $\delta=\mu_1-\mu_2=0$). Table III shows the summary data for both the control and experimental groups. The control group started with higher evaluations and ended with higher evaluations. Using labels in the holistic scoring method, a mean of pre-evaluation of 3.55 would be considered "partial command of the written language while a post-evaluation mean of 4.16 would be typified as a "command of the written language." The difference was statistically significant at the .02 level ($p<.02$). However, the difference in pre- and post- writing was statistically significant at the .001 level ($p<.001$) and represents a larger improvement in mean evaluations (49.1% vs. 17.1% improvement). The movement by the experimental group using the labels of the holistic scoring method would be considered an improvement from "limited" to "partial" command of the written language.

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Table III

Qualitative Evaluation of Student Writing

Group	Data	Pre-Writing	Post-Process	Difference
Experimental				
	Sum	42.667	70.667	
	Mean	2.37	3.54	1.16*
	SD	.85	.99	
Control				
	Sum	103	104	
	Mean	3.55	4.16	.608**
	SD	.97	.89	

*p<.001
**p <.02

The last outcome to be evaluated was the implementation of an evaluation system. Part of the professional development program was training in a portfolio system called a cumulative writing folder (Collins, 1988). Dr. Crelling trained the teachers in the use of this system along with focus correction areas. A focus correction area is a specific criteria for evaluation (e.g. the inclusion of 10 adjectives, starting each sentence with a capital letter). The recommendation was to limit the number of focus correction areas to no more than three. This limitation helps to solve the problem of teachers being overburdened with the numbers of papers to correct for every single error. It also helps to avoid the discouragement for students who receive a paper that looks like it is bleeding. Thus a teacher can apply grammatical concepts to a writing

assignment and use student examples for correctives, feedback, and reinforcement. The cumulative folder allows for both teacher and student feedback and maintains a record for an entire school year. All elementary teachers in grades 4-6 and language arts teachers in grades 7-12 ordered and used this type of formative evaluation in the 1991-92 school year.

In terms of summative evaluation the Registered Holistic Scoring Method (Holly, 1985) was used to evaluate the quality of the sample for this evaluation project. If one assumes that the method has content validity, the only other area of concern is reliability. In order to develop interrater reliability, a booklet was developed from the manual that explained the scoring method and gave examples of student papers with expert judges' ratings and comments. The manual then contained examples of student papers without rankings. Volunteer judges were asked to judge these and then compare their answers to expert ratings. When this process was completed, volunteer judges were then asked to judge student papers. A Pearson *r* correlation coefficient was obtained for the ratings of both the pre- and post-writing process papers for both the experimental and control groups. The total number of combinations of judgements was 276. The Pearson r correlation coefficient was .78. Data for all papers including the correlation coefficient is included in the Appendix.

Summary

The data included in this report seem to indicate that the professional development model used had an effect on teacher and student behavior and has resulted in both quantitative and qualitative outcomes. The professional development opportunities offered by Dr. Crellin and Ms. Moorehead were highly rated and resulted in positive student outcomes when implemented. The number of student opportunities for writing jumped almost 3 times. In terms of qualitative evaluation, the data seems to indicate that the direct instruction of a writing process can make a significant difference in the quality of student writing. By comparing this implementation to a control indicates that while other classes may start with more qualitative papers, the implementation of writing process instruction results in greater qualitative improvement. One might project that given several years of instruction, students who may be below average in writing might be able to catch up and exceed average students. In terms of evaluation, the use of the cumulative writing process was a popular way to do formative evaluation and the holistic scoring method used proved to be a reliable means of summative evaluation.

RESOURCES

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APPENDIX

TEACHER TRAINING PROGRAMS IN WRITING

The Center for Effective Communication
The NETWORK, Inc.
Andover, Massachusetts 01810
(508) 470-1080

If Marshall had his Taney, Napoleon his Wellington, and Truman his MacArthur, then the English teacher surely has the burden of teaching writing. However, several workshops at The NETWORK, Inc., have given me a handle to grasp and an edge with which to cut down the jungles of WHAT DO I TEACH? HOW DO I GO ABOUT DOING IT? WHAT DO I CORRECT? WHEN DO I FIND THE TIME?

Gerard J. Bufalini, Department Head
Fraser, Michigan

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ABOUT THE CENTER FOR EFFECTIVE COMMUNICATION

Who we are:

The Center for Effective Communication is located at The NETWORK, Inc., a private, non-profit educational consulting firm in Andover, Massachusetts. During the last seven years, the Center has conducted over 1,500 writing workshops and has established long term teacher training and consulting relationships with school districts of every type and size. Thousands of teachers and more than a half million students have benefitted from the Center's work.

Our mission:

The mission of the Center is to deliver high quality, cost effective training and resources to improve students' communication skills -- especially written communication. All of our workshops and materials go through a long development process. Everything we produce must be based on the best research and practice, must be tested in classrooms under a range of teaching conditions, and must make the most difficult jobs of the writing teacher -- planning, correcting and classroom management -- easier.

CENTER FOR EFFECTIVE COMMUNICATION ASSOCIATES

Dr. John Collins, Director

The founder of The NETWORK, Inc.'s Center for Effective Communication, John has presented hundreds of writing workshops across the country. He is an acknowledged expert in converting research on writing into practical and time saving teaching techniques. His writing techniques have benefitted more than a half-million students. Schools that have used this technique have been singled out for recognition by the communities and the National Council of Teachers of English. Author of many publications, John's teaching experience covers elementary to graduate levels.

Dr. David Crellin, Senior Associate

David is an Associate of the Center for Effective Communication. For more than twenty years, he was a highly creative teacher of writing in both public schools and colleges. As a program director, he was responsible for developing a widely acclaimed curriculum for the teaching of composition and the writing of research papers. Currently David is consulting with schools throughout the eastern United States. He is the author of *The Composition Workshops* (grades 9-12), published by Houghton Mifflin and a contributor to both Silver Burdette/Ginn's *World of Reading* and D.C. Heath's *Grammar and Composition*.

Associates

The Center has a limited number of Associates who are available to do training and consulting. All of our Associates are veteran classroom teachers who have distinguished themselves as teachers of writing and who have excellent teacher training skills. All have been extensively trained in our techniques and methods.

A WRITING PROGRAM THAT WORKS

Purpose: The purpose of the workshop is to demonstrate how to build three critically important teaching strategies into an effective program of writing instruction.

Audience: This workshop is designed principally for teachers of Language Arts and English (grades 4-12), for whom the teaching of writing is a primary responsibility.

Time Required: This workshop, in its entirety, requires five to six hours. We can present it in one full day or two half day sessions. It can be modified for presentation in a one half day session which includes the essential concepts but with less illustration of specific points and less opportunity for audience participation. We can also redesign it or combine it with our other workshops to meet the needs of an individual school or system. Follow-up sessions for teacher support and program development are available for this program.

At the **Writing Program That Works** workshop you will learn:

1. The three most common problems of school writing programs and how to avoid them.
2. How to diagnose the strengths and weaknesses of your own writing program.
3. How to conduct a meeting to help your colleagues diagnose the strengths and weaknesses of their writing programs.
4. The three most critical elements of an effective writing program.
5. How the three critical elements can give structure and coherence to school writing programs.
6. How to use the three critical elements to increase student involvement in writing instruction.
7. How to increase students' responsibility for their own progress in writing.
8. How to make students into constructive resources to themselves and others when writing.
9. How to generate effective worksheets, quizzes, and tests to teach and measure writing skills.
10. How to save teacher time in lesson preparation.
11. How to help students produce revisions that are under their own, rather than the teacher's, control.
12. How to substantially reduce correction time and make time spent more productive.
13. How to provide feedback on papers that enables students to understand why a paper was graded the way it was and how to improve future work.
14. How to help structure parent involvement so that parents can assist at home without inappropriate intervention.
15. How to help improve coordination between classroom instruction and special needs staff.
16. How to help individualize instruction while still maintaining a whole group focus.
17. How to determine the appropriate writing skills to teach.
18. How to determine the number of writing skills to teach in one year.
19. How to relate topics and assignments to the skills selected for instruction.
20. How to distribute skills instruction over sequences of assignments.
21. How to do monthly planning for instruction.

For additional information, call John Collins, Director, Center for Effective Communication, (508) 470-1080 or (toll free in Massachusetts) 1-800-322-1030 or (toll free outside Massachusetts) 1-800-225-7931 at The NETWORK, Inc., 290 South Main Street, Andover, Massachusetts 01810.

SURVIVING THE RESEARCH PAPER

Purpose: The purpose of the workshop is to demonstrate ways of making the research paper assignment into an effective vehicle for teaching reading, writing, and thinking skills, and saving teacher time and effort in the process.

Audience: This workshop is designed for anyone who teaches the writing of research papers, but a basic assumption in the workshop is that research papers are most appropriately taught in the upper grade levels.

Time Required: This workshop, in its entirety, requires five to six hours. We can present it in one full day or two half day sessions. It can be modified for presentation in a one half day session which includes the essential concepts but with less illustration of specific points and less opportunity for audience participation. We can also redesign it or combine it with our other workshops to meet the needs of an individual school or system. Follow-up sessions for teacher support and program development are available for this program.

At the **Surviving the Research Paper** workshop you will learn:

1. How to help staff examine the different assumptions they have about the research paper and make productive decisions about the place of the research paper in the curriculum.
2. How to bring our own experience in doing research to bear in making the experience more productive and satisfying for students.
3. The different meanings of "research paper" and why it is important to distinguish among them.
4. How to make rational decisions about which students should do which kind of research paper.
5. What the ultimate goals of the research paper ought to be.
6. How to effectively eliminate plagiarism.
7. How to use five writing strategies that produce well written papers.
8. How to test students to see if they have mastered the important research skills.
9. How to individualize research paper assignments to challenge able students and reward less able ones.
10. How to implement a six week plan for teaching the research paper.
11. How to use Focus Correcting to cut correcting time substantially.
12. How to use alternative grading systems that are quick, fair, and easy for students to understand.
13. How to use past papers to help students eliminate the most common research writing problems.
14. How to create learning teams to improve the quality of student writing and thinking.

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WRITING ACROSS THE CURRICULUM

Purpose: The purpose of the workshop is to demonstrate ways of using writing activities to increase students' understanding of course content, their classroom involvement, and their motivation to learn. An important theme in the workshop is actually saving teacher time and effort in preparing and conducting lessons as well as in processing student work.

Audience: This workshop is designed for teachers of grades 4 and above in all subject areas.

Time Required: This workshop, in its entirety, requires five to six hours. We can present it in one full day or two half day sessions. It can be modified for presentation in a one half day session which includes the essential concepts but with less illustration of specific points and less opportunity for audience participation. We can also redesign it or combine it with our other workshops to meet the needs of an individual school or system. Follow-up sessions for teacher support and program development are available for this program.

At the **Writing Across the Curriculum** workshop you will learn:

1. Why many teachers at all grade levels and in all subject areas are using writing activities to help students learn more effectively.
2. How to use writing as an effective classroom activity without being an accomplished writer yourself, without an extensive knowledge of grammar, or without a knowledge of theories of techniques of writing instruction.
3. How to use writing activities in the classroom without taking time from the teaching of "content."
4. How the use of writing activities can actually save time during classroom instruction.
5. How the use of writing activities can save teacher effort and energy during classroom instruction.
6. How the use of writing activities can build student motivation.
7. How the use of writing activities can increase the quality of classroom discussions.
8. How the use of writing activities can increase student responsibility for learning.
9. How to integrate writing activities into the regular classroom routine.
10. How the use of writing activities can give teachers a more effective way of monitoring the learning of individual students and classes.
11. How to use writing effectively without teaching lessons on writing (grammar and mechanics).
12. How to resolve the conflict between correcting for content versus mechanics.
13. How to make correcting/grading promote learning.
14. How to distinguish between the four levels of writing and decide how and when to use each.
15. How to create writing topics and assignments that promote effective learning.
16. How to create assignments that produce good writing and are easy to correct and grade.

For additional information, call John Collins, Director, Center for Effective Communication, (508) 470-1080 or (toll free in Massachusetts) 1-800-322-1030 or (toll free outside Massachusetts) 1-800-225-7931 at The NETWORK, Inc., 290 South Main Street, Andover, Massachusetts 01810.

WRITING IN THE PRIMARY GRADES

Purpose: The purpose of this workshop is to present strategies for classroom organization and instruction that help children in the earliest years discover writing as a rewarding form of self-expression and become resources to themselves and others in building effective writing skills.

Audience: This workshop is designed for teachers in grade K-3 for whom the teaching of writing is a primary responsibility.

Time Required: This workshop, in its entirety, requires five to six hours. We can present it in one full day or two half day sessions. It can be modified for presentation in a one half day session which includes the essential concepts but with less illustration of specific points and less opportunity for audience participation. We can also redesign it or combine it with our other workshops to meet the needs of an individual school or system. Follow-up sessions for teacher support and program development are available for this program.

In the **Writing in the Primary Grades** workshop you will learn:

1. How to create classroom routines that help children become productively involved in writing.
2. How to decide what children should be writing about and how to help them discover topics for writing.
3. How to help children give encouragement and constructive assistance to each other.
4. How to help children use information from others to enrich and improve their writing.
5. How to help children learn to use teacher intervention productively, without becoming dependent upon it.
6. How to decide which skills to teach and when and how to introduce them.
7. How to help children write with a sense of purpose, audience, and voice as essential ingredients of good writing.
8. How to correct student work in a way which teaches skills and still encourages involvement and satisfaction in writing.
9. How to use one's own writing as a resource for helping students discover ideas for writing and developing their ideas.
10. How to use publishing of children's work as a powerful way of motivating their involvement in writing.
11. How to record and document children's progress in writing clearly and efficiently.
12. How to help children develop a sense of confidence in their writing and control over their progress in learning to write.

For additional information, call John Collins, Director, Center for Effective Communication, (508) 470-1080 or (toll free in Massachusetts) 1-800-322-1030 or (toll free outside Massachusetts) 1-800-225-7931 at The NETWORK, Inc., 290 South Main Street, Andover, Massachusetts 01810.

FOLLOW-UP SERVICES FOR TEACHER SUPPORT AND PROGRAM DEVELOPMENT

Purpose: In our workshop we present ideas and techniques that we know are new to many teachers. We motivate participants to experiment with our ideas and help them to adapt our techniques to their individual teaching situations.

It has been our experience that many teachers, especially after a full day workshop with opportunities for "hands on" practice, can effectively implement our ideas in their own classrooms. Other teachers request follow-up sessions, having had time to try our ideas. In these sessions, we answer questions and provide additional support.

A basic assumption in our work, moreover, is that ultimately, writing instruction will be most effective when it is supported by a program -- a unified set of teaching techniques and expectations about student writing that are developed and reinforced over a period of years. But program development takes time. Individual teachers can improve the teaching of writing as a result of a half day or one day workshop, but a school or school system cannot have a writing program as a result of a half-day workshop. Based on these realities, we have also developed an extensive list of program development services.

Audience: Any group of teachers who have attended one of our half or full day workshops and who are committed to try the techniques that were presented.

Length: All of our follow-up work is individually designed for each school or system.

Examples of Our Teacher Support and Program Development Service Sessions:

- Questions and answers about implementing the Cumulative Writing Folder.
- Practice diagnosing Focus Correction Areas from student writing samples.
- Individual and small group trouble-shooting sessions.
- Cross-grade level discussions and coordination sessions to define student writing skill problems and areas of responsibility by grade level.
- Classroom visits to observe teachers teaching or to conduct model writing lessons.
- Individual and small group sessions on specific teaching techniques.
- Creating great writing assignments.
- Developing writing curriculum specialists, consultants, and classroom teachers as teacher trainers so that they can conduct our workshops and provide follow-up assistance. These leadership training sessions have been designed to help larger school systems implement a program in the most cost-effective way.
- Developing Great Writing Teachers: Created as a result of a grant from the U.S. Secretary of Education, Developing Great Writing Teachers is a multi-session, year-long program where teachers are trained to diagnose the strengths and weaknesses of their current writing program, design a new writing program, share the new program with peers, get observer information and reactions to the new program's implementation, and, finally, evaluate student writing growth based on goals of the teacher's own program. Unlike our other follow-up services, the Creating Great Writing Teachers Program takes a commitment of at least five full days spread over an academic year.

For additional information, call John Collins, Director, Center for Effective Communication, (508) 470-1080 or (toll free in Massachusetts) 1-800-322-1030 or (toll free outside Massachusetts) 1-800-225-7931 at The NETWORK, Inc., 290 South Main Street, Andover, Massachusetts 01810.

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WORKSHOP FEES, PUBLICATIONS, AND PRODUCTS

Workshop Fees: Fees for workshops conducted by the Center for Effective Communication are determined by workshop length and travel time to workshop site. Our full day workshop fee ranges from $400 to $600. Half day workshops are available for reduced fees. Mileage and other travel costs (airfare, hotel, meals, etc.) are in addition to the fee. To help reduce costs, we encourage our clients to conduct multi-school or multi-district sessions. We also try, when possible, to schedule workshops so our travel costs will be minimized. These fees are subject to periodic change.

For most of our initial workshops there is no limit on the size of the audience but because of the nature of the sessions, some of our follow-up work has audience size limits.

We will refund our workshop fee if any client feels that our workshops are not helpful.

Publications:

The Effective Writing Teacher by John Collins, Ed.D.
The *Effective Writing Teacher* describes a writing program for teachers who want to improve their writing instruction. It includes:

- strategies that improve student writing and build confidence;
- techniques that save teachers time;
- a one month master plan with step-by-step instructions for getting the system in place;
- an assessment survey for teachers to evaluate their current method of teaching writing; and,
- a letter to parents that explains the program and encourages their help and support.

His approach provides teachers with suggestions and a plan they can use immediately. The book is filled with practical advice based on his thorough understanding of the realities of the classroom.

Implementing the Cumulative Writing Folder Program by John Collins, Ed.D.
Implementing the Cumulative Writing Folder Program provides answers to the most frequently asked questions about the Cumulative Writing Folder program. For example, there are clear answers to the questions: How do you grade papers using focus correction? How do you use the overhead projector to teach editing skills? and Describe a year's plan for using the **Cumulative Writing Folder.**

Products:

The Cumulative Writing Folder by John Collins, Ed.D.
The Cumulative Writing Folder System is a package of 25 easy-to-use folders, designed to motivate students to write better compositions. Teachers focus only on the most critical skill areas needing improvement. The result is less teacher effort, more student learning. It is a system that works . . . for teachers, students, and parents. Each package comes with a set of directions that not only explains how to use the Cumulative Writing Folder but also offers further tips on teaching writing effectively.

Future Publication:

Surviving The Research Paper: Strategies to Improve the Research Writing Experience for Teachers and Their Students. *This book is a practical guide to help teachers improve the quality of research writing in high schools. It will help teachers determine who should be required to write the paper and will present teaching strategies for the essential research skills. It includes a six week plan of instructional strategies and assignments that lead to a well written research essay.* ***Surviving the Research Paper*** *will be available in 1990.*

WHAT OTHERS SAY ABOUT OUR WORK

Of all the writing conferences I have been to, this has been the most helpful to me. I have shifted grade levels five times in the past six years, and finally I have a writing program that will work for all those levels. Thank you.

Elizabeth Fitzgerald
North Tarrytown, New York

"In the twenty years of NETWORK service to schools across the United States, this program has been our most popular. We have presented it hundreds of times for thousands of teachers, who have given it rave reviews."

David P. Crandall, Ed.D.
President
The NETWORK, Inc.

The Cumulative Writing Folder Collins developed and researched makes peer editing effective.

R&D Interpretation Service Bulletin, 1985
Charlestown, West Virginia

Boston's Solomon Lewenberg Middle School already shows dramatic gains. In 1983, 37% of the eighth-grade students failed the writing section of a state basic skills test, the worst record in the city. In 1984, after we adopted the Cumulative Writing Folder, the entire eighth grade passed the test. 'I'd attribute it all to the folder, as well as the training provided,' said Thomas O'Neill, Lewenberg principal.

Education USA, October 7, 1985
Washington, DC

Thanks for an in-service program that was entertaining, reassuring, and inspiring. Your ideas have given a needed cohesion and additional enthusiasm to our writing program. Integration of focus correction areas with the skill array of the HSPT has contributed to improved test results. Best of all, students respond positively to your approach.

Sylvia E. Duda, Department Head
Medford, New Jersey

This is an excellent conference and presents an excellent program. The program presented is focused and effective, both in terms of student learning and teacher time. It provides teachers using the Vermont Writing Program a way of zeroing in on class and individual needs without losing the thrust of the VWP.

David Steele, High School Department Head
Woodstock, Vermont

Some teachers in the Lebanon School District have been involved in the writing process for a number of years. Your presentation of "A Writing Program That Works" demonstrated to them that there is a writing process that not only works but it is more efficient and much more effective. Veteran teachers have changed, new teachers are involved. Both teachers and students are reaping the benefits, even primary teachers.

Douglas Carver, Principal
Lebanon, New Hampshire

Excellent presentation of worthwhile techniques. Everyone needs to hear this! I felt today's workshop was virtually flawless. I look forward to beginning implementation of this useful format. The techniques, handouts, and information are all very 'workable', and today's lecture assured me of how readily this format can be put into action.

William Bolick, English Teacher
Dunwoody, Georgia

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This is a marvelous program. Your presentation was excellent.

Inger Ruffels
Darien, Connecticut

I am excited about taking these ideas back to my department. I am especially anxious to try focus correcting. This makes more sense than sliced bread. How I have longed to hear these ideas that I'm sure will enhance my teaching of writing!

Vicki C. Collins, English Department Chairperson
Jacksonville, North Carolina

Collins' program partners right up with 'What Works' suggestion for teaching writing – the process method of brainstorming, composing, revising, and editing – by providing a teacher management system that spells out how to do it. And the how-to-do-it leans heavily on setting up a system that makes students write extensively while letting teachers monitor and correct the writing without collapsing from overwork and losing all their free weekends.

John Hollifield
R&D Preview, 1986

Sparking enthusiasm in teachers through workshops is an important aspect of professional development. These immediate gains were realized through this workshop, but it is the long-term gains that matter: Our staff and students now apply the principles, share common goals, and write to communicate. The workshop and materials are excellent products, carefully distilled, and are used daily in our district.

Carol Tremper, Gifted and Talented Teacher
Newton, New Jersey

Our teachers unanimously agreed that the ideas and techniques promoted in both The Effective Writing Teacher and the Cumulative Writing Folder produced more organized teachers, provided consistency in composition instruction and evaluation, made grading easier and more effective, and significantly improved the quality of students' writing and their attitude towards composition . . . . Finally, a system for teaching and evaluating composition that offers both direction and flexibility.

Shannon Webster, Department Head
Littleton, Massachusetts

I know I can make major adjustments to my writing segments using the constructive methods presented in this workshop. The workshop spans the various levels of instruction and encompasses the major areas of teaching writing effectively. The presentation justified many concerns I have about our present curriculum. It also demonstrated corrective techniques to effectively enhance our program and increase children's writing abilities.

Christine A. Coleman, Fifth Grade Teacher
Baltimore, Maryland

It sounds like a godsend. I can't wait to go back and share with my faculty.

Tina Cliff, Department Chairperson
Columbus, Georgia

The NETWORK writing program is a much needed boost to long overworked English teachers who have resigned themselves to a lifetime of grueling paperwork. Although the concepts are innovative, uplifting, and inspiring, at the same time they are practical and flexible for individual teaching styles. Our writing staff voted unanimously to institute this program which reflects the goals of the new N.Y.S. Syllabus in English Language Arts.

Joan Schatz, Teacher
Callicoon, New York

The Cumulative Writing Folder *program allows teachers to control the writing process . . . leaving room for individual styles.*

Anne Steele, Department Head
Falmouth, Massachusetts

As director of a college and high school English articulation program, I have sponsored several **Center for Effective Communication** *workshops. These presentations have consistently attracted a large audience and have been responsible for generating excitement about the teaching of writing among local language arts teachers. Even the most blase English teachers leave these workshops with a new sense of purpose and a rekindled interest in teaching. In follow-up activities with many workshop participants, I have found them adapting the writing folder approach to their own teaching and their school curriculum with a great deal of success.*

Michael L. Williamson, Ph.D., Professor
Indiana University of Pennsylvania

The workshops presented at our agency by members of **The Center for Effective Communication** *have always been carefully planned and superbly executed.* **The Writing Progam that Works** *give teachers an understanding of the teaching attributes necessary to make a writing program work.*

Aaron Stander, Head/Language Arts
Oakland, Michigan

If a district is searching for a writing program that is relatively inexpensive, can be put into place in one year and at all grade levels, does not add to a teacher's work load, and most of all, results in remarkable improvement quickly -- The NETWORK program is the only choice.

Theresa P. Vitale, Teacher
East Haven, Connecticut

Wonderful! Very clear, concise and humorous. Best workshop I've had! I'm very inspired to implement this in my own classroom.

Janet S. Rogers, English Teacher
Wake Forest, North Carolina

PUBLICATIONS ORDER FORM

Qty.	*Publication*	*Unit Price*	*Subtotal*
	The Effective Writing Teacher	$ 6.50	
	The Cumulative Writing Folder *(set of 25 with Teacher's Guide)*	$ 15.00	
	Implementing the Cumulative Writing Folder Program	$ 10.00	
Name _____		Subtotal:	
Address _____		Shipping:	$ 2.00
City, State, Zip Code _____		Total Enclosed:	

*** *Please make checks payable to* **The NETWORK, Inc.** ***

EXAMPLES OF DOMAINS AND FORMS OF WRITING WITH SUGGESTED FOCUS CORRECTION AREAS

I. **Imaginative/Narrative:** "Writing in which the main intent is to tell a story."

some forms: short story, biography, autobiography, myth, legend, folk tale, children's story, anecdote, news story, sports story, science report, summary, newsletter, narrative poem

potential FCAs: a beginning that captures interest; chronological or other appropriate order, clarity about who, what, when, where, why, and how; relevance of events to plot or purpose

II. **Practical/Informative:** "Writing in which the main intent is to provide clear information."

some forms: description (technical) of an object, description of a process (how to), how something works, recipe, definition, invitation, announcement, poster, rules, handbook, questionnaire

potential FCAs: step-by-step organization, relevance of all details, sufficient detail, terminology appropriate for audience, varied sentence structure, transitions for clarity

III. **Sensory/Descriptive:** "Writing in which the main intent is to create a dominant impression . . . so that reader has the same impression the writer had."

some forms: prose descriptions of people (faces, bodies) objects, places; poems

potential FCAs: use of establishing sentence, appeal to all relevant senses, spatial order, vivid language, avoidance of cliche words and expressions, relevance of detail, figurative language

IV. **Analytical/Expository:** "Writing in which the main intent is analyze, explain why, in the writer's opinion, something is the way it is, influence or persuade."

some forms: literature essay, research paper, persuasive essay, letter to editor, review of restaurant, movie, or album

potential FCAs: clear statement of purpose or belief; sufficient support for general statements; develops ideas in proportion to their importance; conclusion that reinforces, summarizes or challenges.

V. **Writing about Feelings:** **Writing in which the main intent is to tell the reader about how and why the writer feels as s/he does about a topic.**

some forms: letters and notes of sympathy, congratulations, appreciation

-- Note --

Some FCAs are specific to each domain and forms within domains, but some are general -- appropriate to all domains.

- **mechanical:** complete sentences; standard usage; appropriate punctuation, spelling, capitalization
- **organizational:** paragraphing, order, relevance of detail or information, transitions, beginnings and endings that establish focus and purpose
- **style/expression:** sentence variety; word choice that is appropriate to purpose, audience, and is natural and fluent
- **content:** the writing has richness of detail, shows involvement of the writer, writing that is believable, writing that is accurate

The forms and potential FCAs are only suggested examples. There are many more forms and FCAs appropriate for all grade and student ability levels.

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The Center for Effective Communication
290 South Main Street, Andover, Massachusetts 01810
(508) 470-1080

MHO:213.DWC

PD-4673
2/91

STAFF DEVELOPMENT PARTICIPANT EVALUATION

THIS SECTION TO BE COMPLETED BY THE PROGRAM COORDINATOR	
PROGRAM IDENTIFICATION NUMBER:	TOPIC CODE NUMBER (from page 5 of PD-4672):

NOTE: Each program participant should complete this form at the end of each Staff Development Program.

PART A: 1. Title of Staff Development Program you have just completed: Writing Academy

2. Is this the first staff development activity you have attended since last July? ☐ YES ☑ NO

3. Indicate your position:
   a) ____ Administrator
   b) ____ Parent
   c) ____ Instructional Paraprofessional
   d) ✓ Teacher
   e) ____ Professional Support Staff
   f) ____ Other (specify): ____

	POOR				EXCELLENT
4. The program was well organized.	1	2	3	4	5
5. The objectives of the program were clearly evident.	1	2	3	4	5
6. The leader(s)/instructor(s)' instructional skills were:	1	2	3	4	5
7. The program included an effective level of participant involvement.	1	2	3	4	5
8. Facilities and accommodations were conducive to learning.	1	2	3	4	5
9. The program provided the necessary ingredients for me to have an effective learning experience.	1	2	3	4	5
10. I will be able to use the information and/or skills acquired through this program to improve my effectiveness in my job.	DISAGREE 1	2	3	4	AGREE 5

PART B: Only teachers and administrators should complete items 11 and 12. Parents and all other program participants should proceed to Part C, item 13.

11. TEACHERS AND ADMINISTRATORS: Check all that apply to your current assignment.

a) ✓ Public School
b) ✓ Elementary
c) ____ Middle Sch./Jr. High
d) ____ High School
e) ____ Special Education
f) ____ Bilingual Education
g) ____ Migrant Education
h) ____ Non-Public School
i) ____ Early Childhood Education
j) ____ Vocational Education
k) ____ Compensatory Education
l) ____ Gifted and Talented
m) ____ Adult Education
n) ____ Health Education
o) ____ Assigned to teach a new SUBJECT AREA within the last two years
p) ____ Assigned to teach a new GRADE LEVEL within the last two years
q) ____ Teaching outside of your college major or minor area of study
r) ____ Other assignment (please specify): ____

12. If you are an administrator or a teacher, indicate your years of experience in your current role:

ADMINISTRATORS	TEACHERS
a) ____ 0-5 Years Experience	e) ____ 0-5 Years Experience
b) ____ 6-10 Years Experience	f) ____ 6-10 Years Experience
c) ____ 11-15 Years Experience	g) ____ 11-15 Years Experience
d) ____ More Than 15 Years	h) ✓ More Than 15 Years

PART C: **All program participants should complete Part C.**

13. Please make any suggestions that you feel would improve the effectiveness of the program: (Use reverse side)

PART D: (The Program Coordinator may wish to use Part D for collecting additional information from program participants.)

--OVER--

Section 98 Grant
Writing Experiment

Writing Opportunities

Pre-Workshops		Post-Workshops	
X_1	X_1^2	X_2	X_2^2
11	121	6	36
4	16	6	36
4	16	20	400
3	9	9	81
100	10000	5	25
25	625	130	16900
15	225	350	122500
10	100	11	121
14	196	180	32400
4	16	43	1849
6	36	130	16900
70	4900	244	59536
7	49	40	1600
11	121	180	32400
16	256	25	625
		30	900
		20	400
		46	2116
		18	324
		20	400
		4	16
		70	4900
		25	625
		15	225
		37	1369
		28	784
		180	32400
		160	25600
		165	27225
		160	25600
		160	25600
		70	4900
		80	6400
		160	25600
		60	3600
		30	900
		15	225
		119	14161
		20	400
Averages 20		78.744	
Standard Deviation 26.691		79.785	
Sums 300	16686	3071	490079
Count (N) 15	15	39	39

Section 98 Writing Experiment
Writing Experiment

Workshop Participant Evaluation Survey

	Question Number						
	4	5	6	7	8	9	10
Whole	4	4	4	4	3	4	4
Language	4	4		2	3	3	3
	4	3	4	4	1	4	4
	5	5	5	4	3	4	3
	5	5	5	5	5	5	5
	5	5	5	5	5	5	5
	5	5	5	4	4	5	4
	4	4	5	4	4	4	5
	5	5	5	5	5	5	5
	5	5	5	5	5	5	5
	4	4	4	4	4	4	3
	5	5	5	5	5	5	5
	4	3	4	3	2	3	3
	4	4	5	3	4	4	5
N=14	5	5	5	4	3	4	5
Averages	4.5333	4.4	4.7143	4.0667	3.7333	4.2667	4.2667
Writing	5	4	4	4	5	4	5
Process	4	3	4	5	5	4	5
	4	4	5	5	4	5	5
	5	5	5	5	5	5	5
	5	5	5	5	5	5	5
	4	4	5	5	5	4	4
	5	5	5	5	5	5	5
	5	4	4	4	4	4	4
	5	4	4	5	4	4	5
	5	5	5	5	5	5	5
	4	5	5	5	3	5	5
	5	5	4	5	4	5	5
	4	4	4	5	4	4	4
	5	5	5	5	5	5	5
	5	4	5	5		5	5
	5	5	5	5	5	5	5
	5	4	5	5	5	5	5
	5	5	5	5	5	5	5
	5	5	5	5	4	5	5
	5	5	5	5	4	5	5
	4	4	5	5	4	5	5
	5	5	5	5	5	5	5
	4	5	5	5	5	4	5
	4	3	4	5	4	2	2
	4	4	5	5	5		5
	5	5	5	5	5	5	5
	5	5	5	5	5	5	5
	4	5	5	5	3	4	4
	5	5	5	5	4	5	5
	5	5	5	5	5	5	5
	5	5	5	5	5	5	5
N=31	5	5	5	5	5	5	5
Averages	4.6875	4.5625	4.7813	4.9375	4.5484	4.6452	4.7813

Total Averages for all workshops N=45

4.6361 4.5083 4.7599 4.6472 4.2709 4.5163 4.6097

Yale Public Schools
Writing Experiment

Evaluation of Student Papers
Control Group

	Pre-score			Avg.								Post-score				Avg.	Differences							
Code	1	2	3		z1	z2	z3	z1z2	z2z3	z1z3	Code	1	2	3			d	d2	z1	z2	z3	z1z2	z2z3	z1z3
86526	2	3	2	2.3333	-1.6	-0.6	-1.6	0.91	0.91	2.56	00922	3	4	5	4		1.667	2.778	-1.3	-0.2	0.94	0.2343	-0.2	-1.2
44200	3	3	2	2.6667	-0.6	-0.6	-1.6	0.32	0.91	0.91	45371	5	5	5	5		2.333	5.444	0.944	0.94	0.94	0.8908	0.89	0.89
35018	1	2	2	1.6667	-2.6	-1.6	-1.6	4.21	2.56	4.21	33055	3	1	2	2		0.333	0.111	-1.3	-3.6	-2.4	4.6277	8.62	3.16
59570	3	4	4	3.6667	-0.6	0.46	0.46	-0.3	0.22	-0.3	22232	3	3	3	3		-0.67	0.444	-1.3	-1.3	-1.3	1.6988	1.7	1.7
11225	3	3	4	3.3333	-0.6	-0.6	0.46	0.32	-0.3	-0.3	62871	4	5	4	4.3333		1	1	-0.18	0.94	-0.2	-0.17	-0.2	0.03
74418	3	4	3	3.3333	-0.6	0.46	-0.6	-0.3	-0.3	0.32	05049	6	5	5	5.3333		2	4	2.067	0.94	0.94	1.9513	0.89	1.95
85474	4	3	3	3.3333	0.46	-0.6	-0.6	-0.3	0.32	-0.3	42362	5	4	5	4.6667		1.333	1.778	0.944	-0.2	0.94	-0.17	-0.2	0.89
97192	3	4	3	3.3333	-0.6	0.46	-0.6	-0.3	-0.3	0.32	25993	5	4	6	5		1.667	2.778	0.944	-0.2	2.07	-0.17	-0.4	1.95
88220	3	3	3	3	-0.6	-0.6	-0.6	0.32	0.32	0.32	43508	3	2	4	3		0	0	-1.3	-2.4	-0.2	3.1632	0.44	0.23
31719	2	5	2	3	-1.6	1.5	-1.6	-2.4	-2.4	2.56	36223	4	4	5	4.3333		1.333	1.778	-0.18	-0.2	0.94	0.0323	-0.2	-0.2
54931	4	5	4	4.3333	0.46	1.5	0.46	0.69	0.69	0.22	75853	4	4	4	4		-0.33	0.111	-0.18	-0.2	-0.2	0.0323	0.03	0.03
01837	5	6	6	5.6667	1.5	2.53	2.53	3.78	6.39	3.78	30870	5	4	5	4.6667		-1	1	0.944	-0.2	0.94	-0.17	-0.2	0.89
10537	4	4	3	3.6667	0.46	0.46	-0.6	0.22	-0.3	-0.3														
32404	4	4	4	4	0.46	0.46	0.46	0.22	0.22	0.22	45623	4	3	3	3.3333		-0.67	0.444	-0.18	-1.3	-1.3	0.2343	1.7	0.23
94051	4	3	6	4.3333	0.46	-0.6	2.53	-0.3	-1.4	1.17	04491	4	4	4	4		-0.33	0.111	-0.18	-0.2	-0.2	0.0323	0.03	0.03
99755	1	3	4	2.6667	-2.6	-0.6	0.46	1.49	-0.3	-1.2	84187	5	4	4	4.3333		1.667	2.778	0.944	-0.2	-0.2	-0.17	0.03	-0.2
44339	3	4	5	4	-0.6	0.46	1.5	-0.3	0.69	-0.8	21569	2	2	4	2.6667		-1.33	1.778	-2.43	-2.4	-0.2	5.8902	0.44	0.44
11016	4	5	5	4.6667	0.46	1.5	1.5	0.69	2.24	0.69	12067	4	4	5	4.3333		-0.33	0.111	-0.18	-0.2	0.94	0.0323	-0.2	-0.2
38268	2	3	3	2.6667	-1.6	-0.6	-0.6	0.91	0.32	0.91	80307	2	3	3	2.6667		0	0	-2.43	-1.3	-1.3	3.1632	1.7	3.16
08429	1	2	4	2.3333	-2.6	-1.6	0.46	4.21	-0.7	-1.2	63775	4	4	5	4.3333		2	4	-0.18	-0.2	0.94	0.0323	-0.2	-0.2
37948	3	4	4	3.6667	-0.6	0.46	0.46	-0.3	0.22	-0.3	18941	5	4	4	4.3333		0.667	0.444	0.944	-0.2	-0.2	-0.17	0.03	-0.2
24627	4	4	4	4	0.46	0.46	0.46	0.22	0.22	0.22	93692	4	5	4	4.3333		0.333	0.111	-0.18	0.94	-0.2	-0.17	-0.2	0.03
44863	6	5	6	5.6667	2.53	1.5	2.53	3.78	3.78	6.39	07137	5	5	6	5.3333		-0.33	0.111	0.944	0.94	2.07	0.8908	1.95	1.95
06173	5	4	6	5	1.5	0.46	2.53	0.69	1.17	3.78	88329	5	5	6	5.3333		0.333	0.111	0.944	0.94	2.07	0.8908	1.95	1.95
10779	5	2	5	4	1.5	-1.6	1.5	-2.4	-2.4	2.24	98885	5	5	5	5		1	1	0.944	0.94	0.94	0.8908	0.89	0.89
27795	2	3	3	2.6667	-1.6	-0.6	-0.6	0.91	0.32	0.91	68264	3	5	6	4.6667		2	4	-1.3	0.94	2.07	-1.23	1.95	-2.7
68721	4	4	6	4.6667	0.46	0.46	2.53	0.22	1.17	1.17														
40894	2	4	3	3	-1.6	0.46	-0.6	-0.7	-0.3	0.91														
43781	1	3	3	2.3333	-2.6	-0.6	-0.6	1.49	0.32	1.49														
Count (N)				29				29	29	29	Count (N)				25		25	25				25	25	25
Totals				103				18.2	14.5	30.7	Totals				104		14.67	36.22				22.27	21.5	15.7
Averages				3.5517							Averages				4.16		0.587	1.449	Correlation of judgements					
Standard											Standard								Sum of z's			213.71		
Deviations				0.9692							Deviations				0.89				n-1			275		
																			r			0.777		

Yale Public Schools
Writing Experiment

Evaluation of Student Papers

Experimental Group

Pre-score											Post-score					Differences								
Code	1	2	3	Avg.	z1	z2	z3	z1z2	z2z3	z1z3	Code	1	2	3	Avg.	d	d2	z1	z2	z3	z1z2	z2z3	z1z3
23157	4	3	3	3.3333	1.93	0.75	0.75	1.44	0.56	1.44	72621	1	2	1	1.3333	-2	4	-2.55	-1.5	-2.6	3.9415	3.94	6.52
05545	1	3	2	2	-1.6	0.75	-0.4	-1.2	-0.3	0.71	61020	5	4	4	4.3333	2.333	5.444	1.483	0.47	0.47	0.7035	0.22	0.7
14871	3	2	3	2.6667	0.75	-0.4	0.75	-0.3	-0.3	0.56	97839	4	3	4	3.6667	1	1	0.474	-0.5	0.47	-0.254	-0.3	0.22
38976	5	3	4	4	3.11	0.75	1.93	2.32	1.44	6	89160	5	5	6	5.3333	1.333	1.778	1.483	1.48	2.49	2.2003	3.7	3.7
97312	4	5	3	4	1.93	3.11	0.75	6	2.32	1.44	25966	3	4	4	3.6667	-0.33	0.111	-0.53	0.47	0.47	-0.254	0.22	-0.3
11742	2	2	3	2.3333	-0.4	-0.4	0.75	0.19	-0.3	-0.3	81443	4	4	4	4	1.667	2.778	0.474	0.47	0.47	0.2249	0.22	0.22
43361	2	2	3	2.3333	-0.4	-0.4	0.75	0.19	-0.3	-0.3	11322	1	2	2	1.6667	-0.67	0.444	-2.55	-1.5	-1.5	3.9415	2.38	3.94
93806	2	2	2	2	-0.4	-0.4	-0.4	0.19	0.19	0.19	54859	2	3	2	2.3333	0.333	0.111	-1.54	-0.5	-1.5	0.8257	0.83	2.38
49540	3	3	3	3	0.75	0.75	0.75	0.56	0.56	0.56	55043	4	2	3	3	0	0	0.474	-1.5	-0.5	-0.732	0.83	-0.3
36768	2	2	2	2	-0.4	-0.4	-0.4	0.19	0.19	0.19	60350	3	4	4	3.6667	1.667	2.778	-0.53	0.47	0.47	-0.254	0.22	-0.3
07092	1	1	3	1.6667	-1.6	-1.6	0.75	2.63	-1.2	-1.2	74951	4	4	3	3.6667	2	4	0.474	0.47	-0.5	0.2249	-0.3	-0.3
43310	1	1	2	1.3333	-1.6	-1.6	-0.4	2.63	0.71	0.71	61718	4	3	3	3.3333	2	4	0.474	-0.5	-0.5	-0.254	0.29	-0.3
61570	1	2	2	1.6667	-1.6	-0.4	-0.4	0.71	0.19	0.71	28859	5	4	4	4.3333	2.667	7.111	1.483	0.47	0.47	0.7035	0.22	0.7
31352	4	2	2	2.6667	1.93	-0.4	-0.4	-0.8	0.19	-0.8	69381	4	3	3	3.3333	0.667	0.444	0.474	-0.5	-0.5	-0.254	0.29	-0.3
57048	2	2	4	2.6667	-0.4	-0.4	1.93	0.19	-0.8	-0.8	20478	4	4	3	3.6667	1	1	0.474	0.47	-0.5	0.2249	-0.3	-0.3
09243	3	3	2	2.6667	0.75	0.75	-0.4	0.56	-0.3	-0.3													
97957	1	2	2	1.6667	-1.6	-0.4	-0.4	0.71	0.19	0.71	72633	4	3	5	4	1.333	1.778	0.474	-0.5	1.48	-0.254	-0.8	0.7
93732	0	1	1	0.6667	-2.8	-1.6	-1.6	4.55	2.63	4.55	52392	5	5	5	5	3.333	11.11	1.483	1.48	1.48	2.2003	2.2	2.2
											01081	4	3	2	3	2.333	5.444	0.474	-0.5	-1.5	-0.254	0.83	-0.7
											06360	5	5	4	4.6667	4	16	1.483	1.48	0.47	2.2003	0.7	0.7
											83799	4	2	2	2.6667	1	1	0.474	-1.5	-1.5	-0.732	2.38	-0.7
Count (N)				18				18	18	18	Count (N)				20	20	20				20	20	20
Totals				42.667				20.7	5.48	13.9	Totals				70.667	25.67	70.33				14.152	17.9	18.8
Averages				2.3704							Averages				3.5333	1.283	3.517						
Standard Deviations				0.8454							Standard Deviations				0.9911								